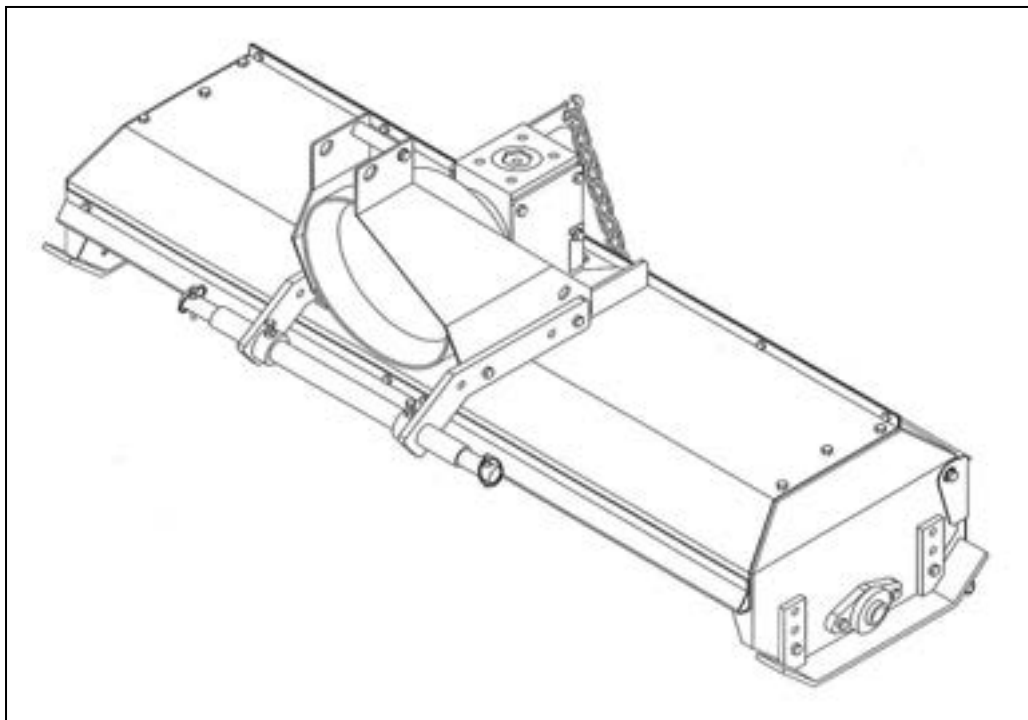




USE AND MAINTENANCE MANUAL

ROTARY TILLER & STONE BURIERS CITY



PREFACE

This manual is an integral part of the machine.

It must always accompany the machine and be kept within reach of the operator.
The enclosures mentioned are an integral part of this manual.

The purpose of this manual.

This manual gives information for the correct and safe use of the implement.
The owner must read this manual carefully before work with the implement.

Responsibility of the owner

The owner is responsible for accidents or damages caused to people or things due to negligence in following the instructions in this manual.

Assistance in using this manual

Explanations: contact the dealer.

Request for additional copies of the manual: in case of loss or wear and tear, or in case one wants the manual in a different language, the customer should ask the dealer or manufacturer.

Pay attention to the warning signals



<Danger>: indicates a situation that is potentially dangerous which, if not avoided, will cause death or serious damage.



<Warning>: indicates a situation that is potentially dangerous which, if not avoided, will cause death or serious damage.



<Caution>: indicates a situation that is potentially dangerous which, if not avoided, can cause minor to moderate damage, or it indicates to be careful about an unsafe procedure.

<Important>: indicates instructions that must be followed precisely in order to avoid damage to the product, process or environment.

<Note>: indicates supplementary information.

DESCRIPTION

PURPOSE

The implement, thanks to the new central transmission that allow a easy reverse of rotor turning direction, to the strength combined with lightness and resilience of the deck and to the shear bolt protection inside the transmission shaft, can be used as rotary tiller or stone buriers in all type of ground whatever its composition (sandy soil, medium mixture, clay) and consistency (crumbly, hard, semi-plastic) at different depth.

The use of a technical constructive concept trended to the search of high performances, reduction of troubles and durability, improves the power/consumption ratio of the tractor thanks to the elasticity of the implement frame, to the tools shape and to many original technical solutions.

PERFORMANCES

The implement is connected to the tractor with a three points hitch that gives the motion of translation and with a PTO shaft connected with the tractor PTO that gives the motion of rotation to the hoes shaft.

The working width is fix and it's determined from the choice of the machine type.

The working depth is adjustable.

The working zone is fixed.

The tail board besides prevents a dangerous hurling of stones and other foreign bodies, makes a clod mincing function the more emphasized the more the baffle is closed.

PERFORMANCES LIMITS

- ❑ Maximum forwarding speed: 1,2 m.p.h.
- ❑ Speeds greater than the maximum can compromise the condition of the machine, the quality of the work and the safety of the operator.
- ❑ Maximum power applicable to the gear box: from 9 to 16 Kw \pm 5% with 540 RPM according to the type.
- ❑ Superior power to which is indicated can damage irreparably the transmission gear box; especially during heavy works.
- ❑ Max working depth: 5,5 inches.

STANDARD EQUIPMENT

- **Standard PTO shaft.**
- **Shear bolt inside transmission.**

VARIANTS & OPTIONS

- **Stone buriers Kit.**

TECHNICAL SPECIFICATIONS

CHARACTERISTICS PER MODEL

Model	Type	Power		Working width		Weight		Working depth		Overall width		N° of blades	
		HP	KW	cm.	inch	Kg.	lbs.	cm.	inch	cm.	inch	n° flange	n° of blades
CITY	65	12-25	9-16	62	24,5	92	203	14	5,5	78,0	30,5	4	12
	85	12-25	9-16	82	32	102	225	14	5,5	98,0	38,5	4	16
	96	12-25	9-16	93	36	113	249	14	5,5	113,1	44,5	6	20
	105	12-25	9-16	102	40	113	249	14	5,5	118,5	46,5	6	20
	125	12-25	9-16	122	48	125	275	14	5,5	139,0	55,0	6	24

SAFETY INFORMATIONS

GENERAL REGULATIONS

- ❑ Only work in daylight.
- ❑ The implement must not be used near people, especially children or animals.
- ❑ Wear long pants and heavy shoes.
- ❑ The protections cover and flaps are an integral part of the implement: always work with them attached.
- ❑ Pay attention using the implement on slopes: work toward the maximum slope and never work in across the slope.
- ❑ Before leaving the driver's seat, turn off the engine and disengage the transmission engine-shaft.
- ❑ Check immediately the implement if it hits foreign objects.
- ❑ Check immediately the implement if there are unusual or strong vibrations.
- ❑ Change defective parts immediately.

SAFETY RESTRICTIONS

Children and people who are not familiar with these instructions must not be permitted to use the implements. Local regulations can restrict the use of the implement depending on age.

SAFETY SIGNS ON THE IMPLEMENT

In this section the safety signs on the implement are reproduced and explained.



1

2

3

4

5

6

1. Read the operator manual.
2. Remove the tractor ignition key before doing maintenance and repair.
3. Don't remove safety protection.
4. Stay at safe distance from PTO shaft.
5. Danger of flying objects. Stay at safe distance.
6. Stay at safe distance from the blades.

The safety signs on the machine must always be legible.

In case of damage, the labels of the signs must be substituted.

In the case of the substitution of implement parts that have safety signs, the signs must be replaced.

Supplying of new safety labels and the application procedure

Contact your dealer to receive new safety labels with instructions for application.

INSTRUCTION FOR USE

BEFORE BEGINNING THE JOB

a) Adjust working depth as follows :

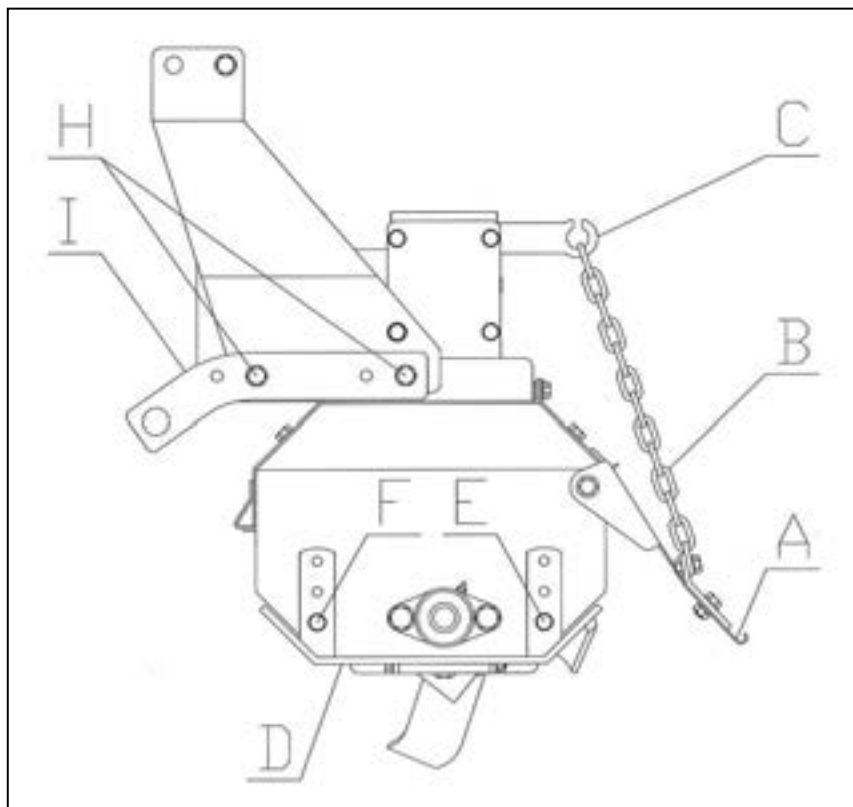
1. Unscrew and remove the screw "E" and "F".
2. Adjust working depth moving slide "D" up to increase and down to decrease the depth.
3. Insert and tighten the screws "E" and "F" .
4. Repeat the same operations on the other side, making sure to set up both slides to the same working depth.

b) Adjust the tail board position operating as follows:

1. Remove the link of the chain "B" from the bracket slot "C".
2. Pull the chain until the tail board "A" is in the desired position and fix it by inserting the corresponding chain link into the bracket slot.

c) Attach the implement to the tractor as follows :

1. If necessary adjust the distance between the implement and the tractor by moving the two arms "I". Remove the four screws "H", move the arms and then tighten the screws.
2. Insert the implement mounting shaft into the lower arms of the tractor's three point hitch and lock with the safety pins.
3. Connect the tie-rod of the upper link of the tractor's three point hitch to the pin at the top of the implement and lock with safety pin.



- d) With the implement raised, go to work area.
- e) Connect the tractor PTO with implement PTO using the cardan shaft supplied.
- f) Check that PTO chain is locked to prevent the protection housing of the PTO from rotating.

TO BEGINNING THE JOB

- a) Keep people and animals away from the implement with a 65 foot radius.
- b) Lower the implement until the hoes touch the ground.
- c) Insert the PTO and gradually bring it to 540 r.p.m..
- d) Lower the implement completely and start to work.

AT THE END OF THE JOB

- a) Stop the tractor.
- b) Raise the implement until the hoes goes out from ground.
- c) Disconnect PTO power.
- d) Disconnect tractor PTO from the mplement PTO.
- e) Raise the implement completely.

MAINTENANCE INSTRUCTIONS

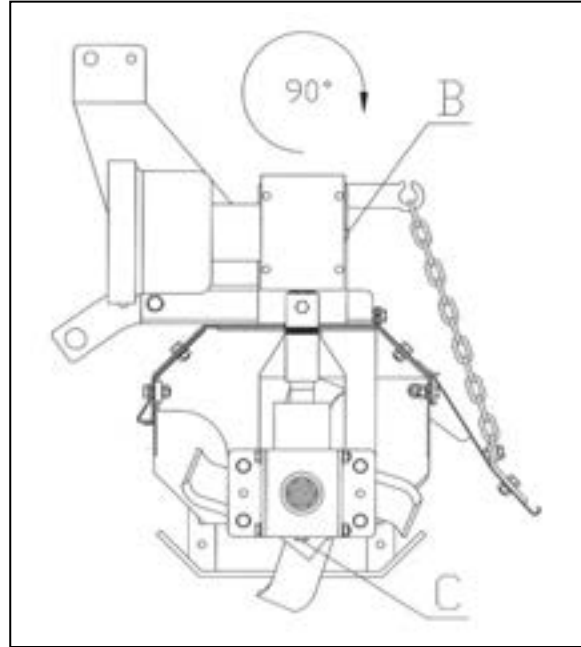
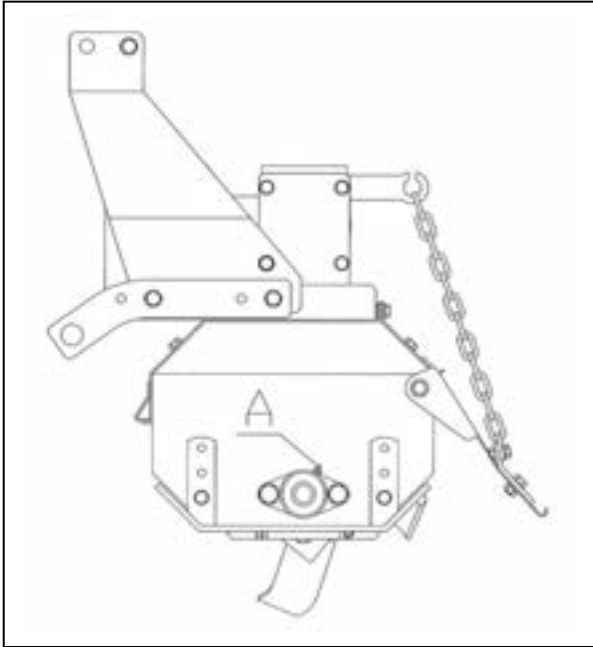
Diagram "A" shows the required maintenances intervals and the work to be carried out.
 Not follow the scheduled maintenance can result in damage to the implement and in this case the warranty is not applicable.

DIAGRAM "A" SCHEDULED MAINTENANCE

	FIRST START	AFTER 10 HOURS	EACH 30 HOURS	EACH 500 HOURS	END SEASON	BEGIN. WORK	END WORK
IMPLEMENT	Greasing		Greasing		Cleaning Greasing		Cleaning
UPPER GEAR BOX	Check oil level	Check oil level	Check oil level	Change oil			
LOWER GEAR BOX	Check oil level	Check oil level	Check oil level	Change oil			
SCREWS		Tighten	Tighten				
HOES			Check		Check	Check	Check

1. GREASING

Grease point "A" on both sides of the implement at the terms show in diagram "A".
The greasing point is equipped with a HYDRAULIC TYPE MODEL "A" UNI 7663 nipple.
Use only MULTIFUNCTIONAL GREASE LITHIUM BASED Type NLGI 2.



2. OIL CHECK - OIL REPLACEMENT IN GEAR BOXES

At the scheduled time on diagram "A", check or replace oil in gear boxes.

To fill oil use only OIL SAE 140 EP.

Gear box capacity: upper 0.5L, lower 0.7L

a) To check the oil level in the upper gear box :

1. Turn the implement 90° in the direction opposite of that shown by the arrow, unscrew plug "B" and check that gear box is full of oil.
2. If the level it's ok insert and lock plug "B".
3. If the level it's low add oil.
4. Return the implement to its original, level position.

b) To check the oil level in lower gear box :

1. Rotate the implement 180° in the direction of the arrow, unscrew plug "C" and check that gear box is full of oil.
2. If the level it's ok insert and lock plug "C".
3. If the level it's low add oil.
4. When the level it's ok insert and lock plug "C".
5. Return the implement to its original, level position.

c) To replace oil in the upper gear box :

1. Rotate the implement 90° in direction of arrow, unscrew the plug "B" and drain oil through the hole.
2. Turn the implement 180° in the direction opposite shown by the arrow.
3. Fill with new oil. Use only the type and quantity shown on page 10. ATTENTION : fill oil slowly to prevent overflow.
4. When gear box is full insert and lock plug "B".
5. Return the implement to its original, level position.

d) To replace oil in lower gear box :

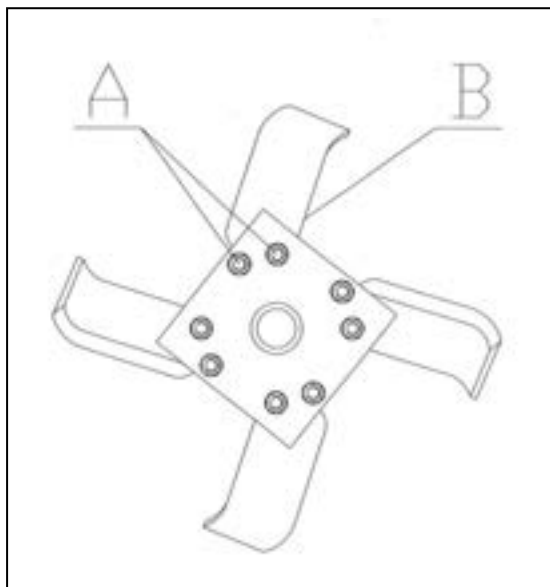
1. Unscrew plugs "C" and drain oil through the hole .
2. Turn the implement 180° in the direction of the arrow.
3. Fill with new oil. . Use only the type and quantity shown on page 10. ATTENTION : fill oil slowly to prevent overflow
4. When gear box is full insert and lock plug "C".
5. Return the implement to its original, level position.

3. SUBSTITUTION OF HOES

a) Change the hoes as follows :

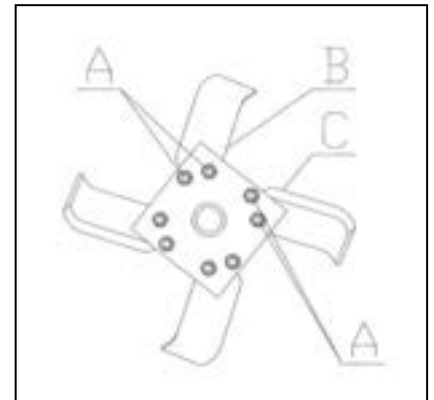
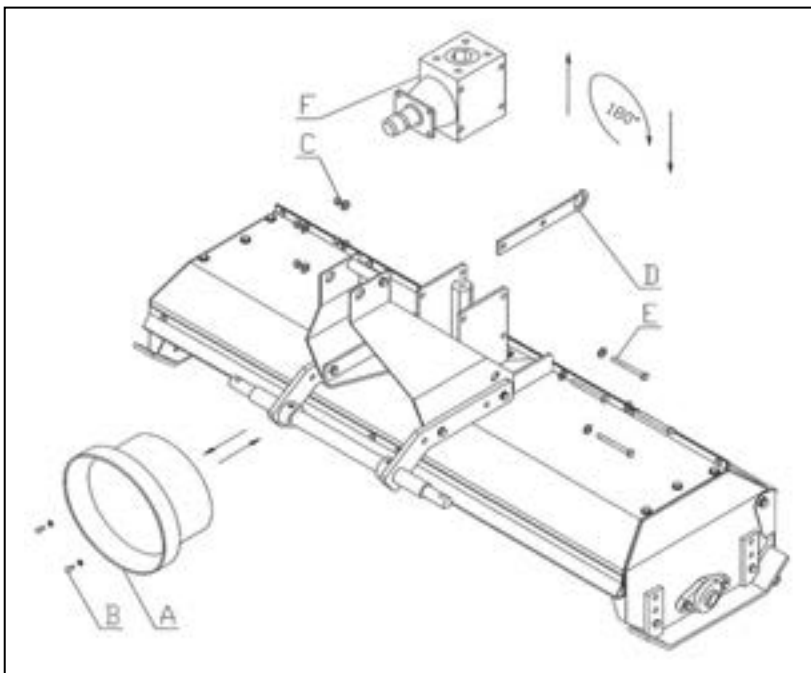
1. Unscrew the two nuts "A" that lock the screws of the hoe being changed.
2. Remove the screws and take off the hoe "B".
3. Attach the new hoe using the new screws supplied.
4. Lock with the nuts "A".
5. Repeat for all the hoes to be changed.

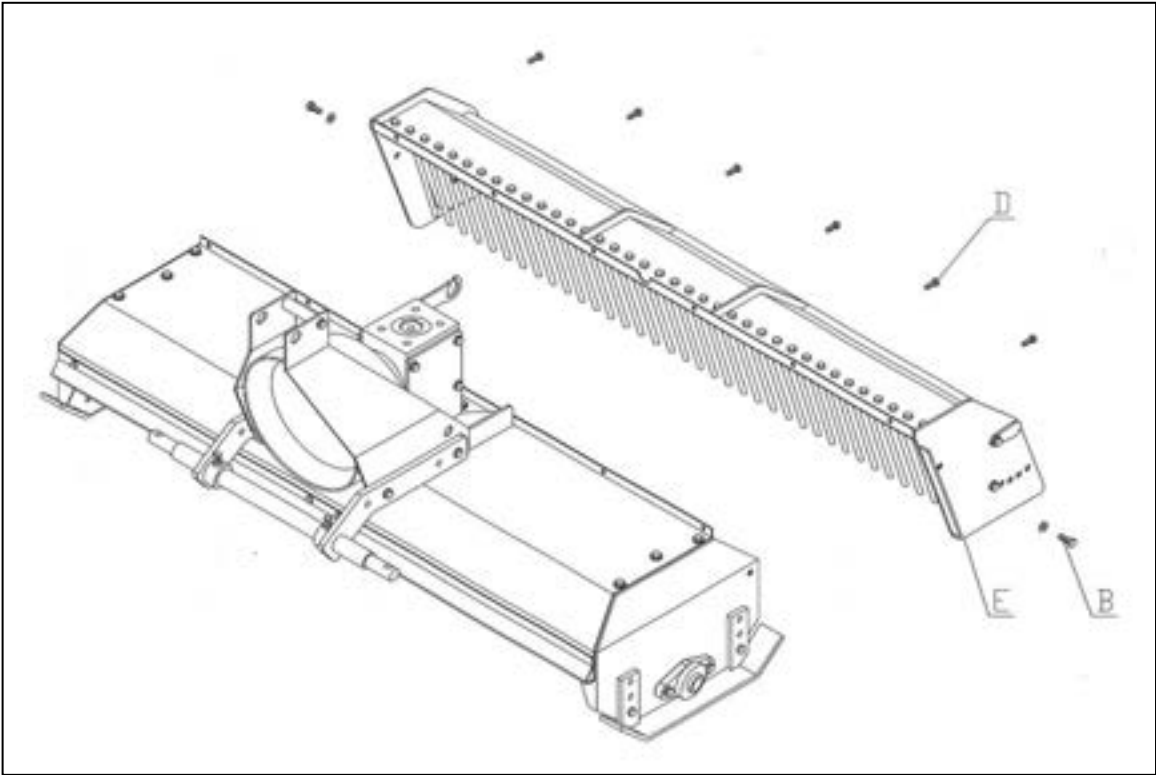
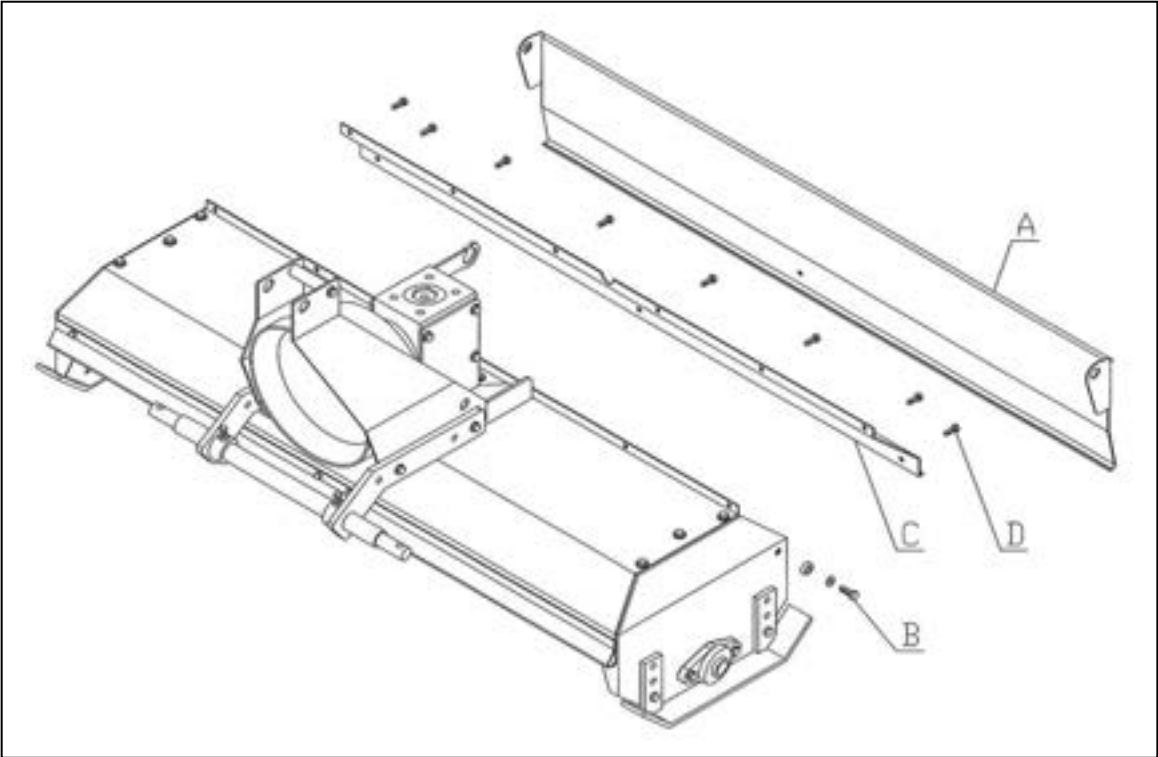
ATTENTION: each flange has 2 right hoes and 2 left hoes.



4. SET UP TILLER OR STONE BURIERS

- a) To transform the implement from tiller to stone buriers and vice versa it is necessary to reverse the rotational direction of the rotor. Proceed as follow :
1. Unscrew the two screws "B" and remove protection "A."
 2. Unscrew the nuts "C," remove the four screws "E" and the chain holder "D."
 3. Remove the gear box "F" from the support, turn it 180° and re-insert it in the support.
 4. Insert the screws "E", the chain holder "D" and fix them with the nuts "C."
 5. Replace the protection "A" and fix it with the screws "B".
- b) After reversing the rotational direction of the rotor, it is necessary to switch the position of the right blades with that of the left blades so that the cutting edges are reversed. Proceed as follows:
1. Unscrew the screws "A" and remove the two adjacent blades "B" and "C" on the same flange.
 2. Attach blade "B" in the position of blade "C" and vice versa so the cutting edges are reversed from their original direction .
 3. Insert and tighten screws "A".
 4. Reverse all blades on all flanges in the same manner.
- c) For optimal operation as a stone burier it is recommended that you install the "Optional Burier Kit". To do so proceed as follows:
1. Remove the tail board "A" by unscrewing the screws "B" on both sides.
 2. Remove the rear deck "C" by unscrewing the ten screws "D".
 3. Attach the Stone Burier Kit "E" using SIX screws "D" and the two screws "B".

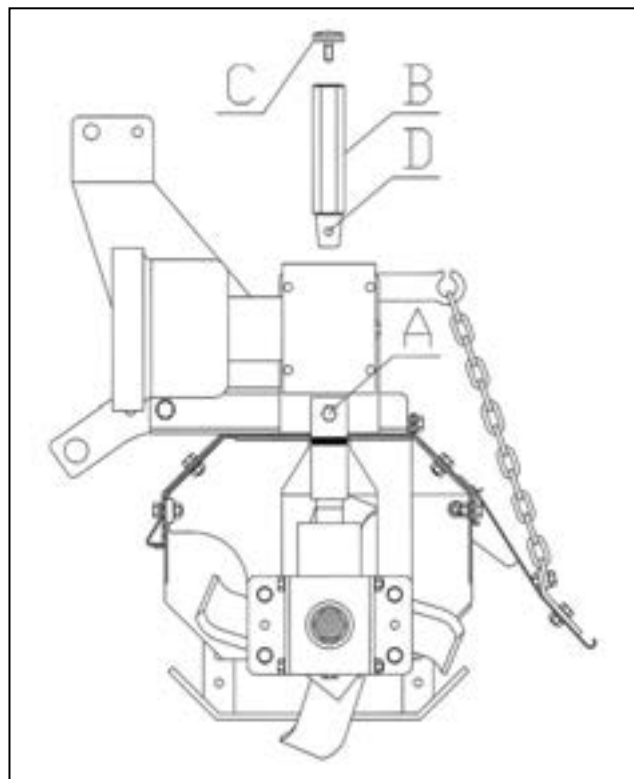




5. SHEAR BOLT REPLACEMENT

a) Replace the shear bolt as follow :

1. Screw the handle "C" into the top of the transmission shaft "B."
2. Using the handle "C" pull the shaft "B" out of the gear box.
3. Take the broken shear bolt out of the hole "D."
4. Grease the conical end of the shaft "B".
5. Insert the shaft in the gear box and push it into the conical seat of the bushing in the lower gear box.
6. Line up the holes in the shaft and the bushing.
7. Push the new shear bolt "A" (M10x75 UNI 5737 8.8) through the holes in the bushing and shaft and fix with a nut.



PROBLEMS SOLVING

PROBLEM	CAUSE AND SOLUTION
Insufficient working depth	<ul style="list-style-type: none"> <li style="text-align: center;">-Decrease the forward speed <li style="text-align: center;">-Increase the working depth setting (slides) <li style="text-align: center;">-Broken hoes - Replace <li style="text-align: center;">-Unbalanced hoes - Balance
Hoes don't penetrate Tiller bounces on the ground and vibrates	<ul style="list-style-type: none"> <li style="text-align: center;">-Broken or damaged hoes - Replace <li style="text-align: center;">-Check mounting of the hoes <li style="text-align: center;">-Foreign objects between hoes - Clean <li style="text-align: center;">-Soil too dry and hard - Decrease the forward speed
Rotor blockage, obstruction	<ul style="list-style-type: none"> <li style="text-align: center;">-Soil too wet - Reduce depth of work <li style="text-align: center;">-Increase number of revolutions of rotor
Excessive tilling of the soil	<ul style="list-style-type: none"> <li style="text-align: center;">-Increase forward speed <li style="text-align: center;">-Raise the rear baffle <li style="text-align: center;">-Reduce number of revolutions of rotor
Poor tilling of the soil	<ul style="list-style-type: none"> <li style="text-align: center;">-Decrease forward speed <li style="text-align: center;">-Lower the rear baffle <li style="text-align: center;">-Increase number of revolutions of rotor

TRANSPORT

Except when working, moving the implement should only take place when the implement is not running and the transmission is disconnected.

<Important>: keep speed low avoiding holes and rough ground.

<Important>: Before transporting the implement always make sure that the safety hooks are in position.

<Note when on the road, obey existing traffic laws. Place warning signal signs on the rear end corner. Respect any and all local laws.

STORAGE

Store the implement in a dry place that isn't dusty.

INFORMATION ON DEMOLITION



At the end of its working life, the implement must be demolished and that can only be done by an authorized authority, in accordance with the national environmental laws in force. Therefore it is necessary to get information from the qualified local authorities on the procedure to follow. The implement is mainly composed of iron materials and paints.

WARRANTY

The implement is covered by the manufacturer warranty for a period of 24 months.

The warranty is not applicable if:

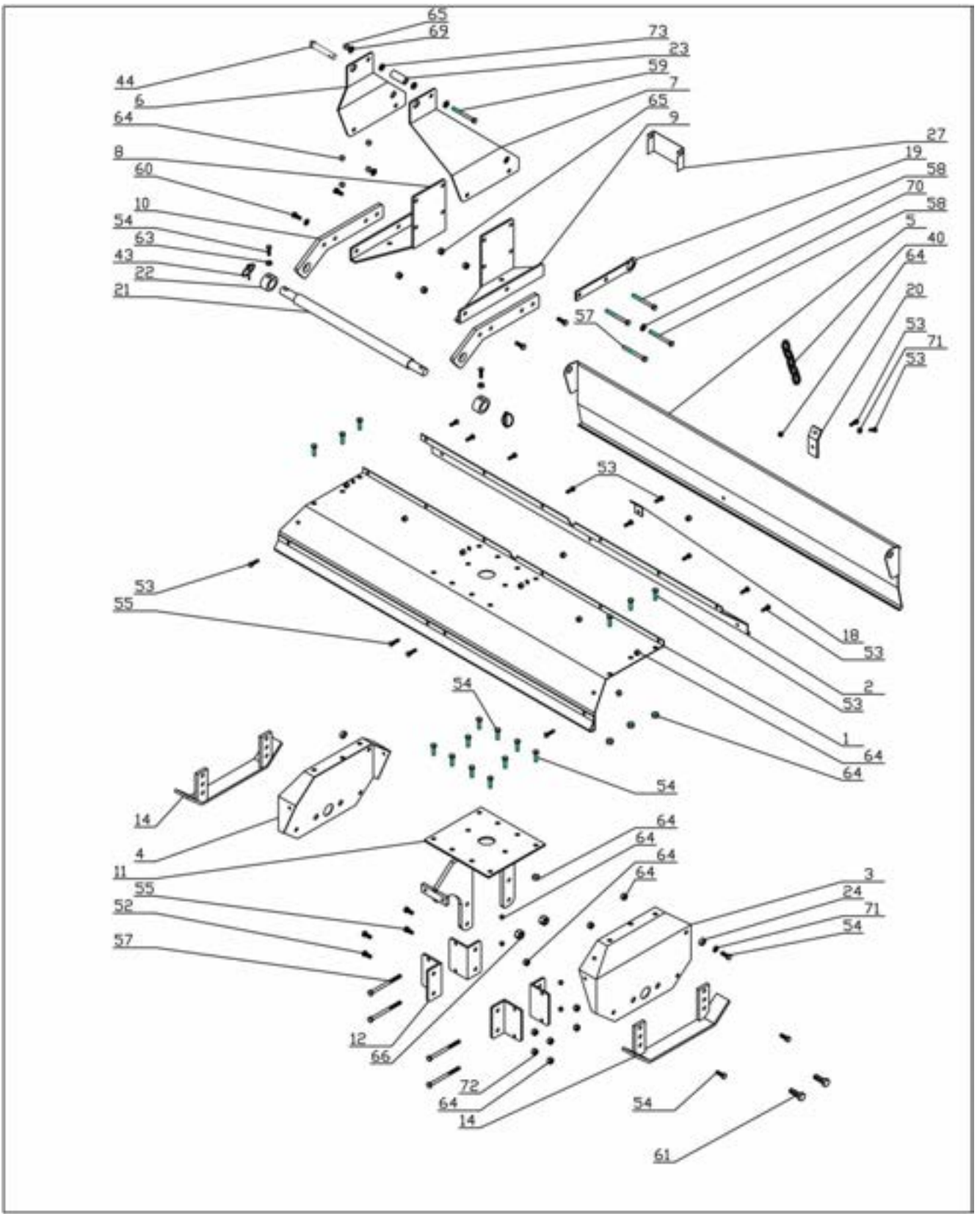
- a) The maintenance work has not been done correctly.
- b) The implement has been used for work it is not designed for.
- c) The implement has been transformed or modified without the manufacturer's written authorization.

SERVICE

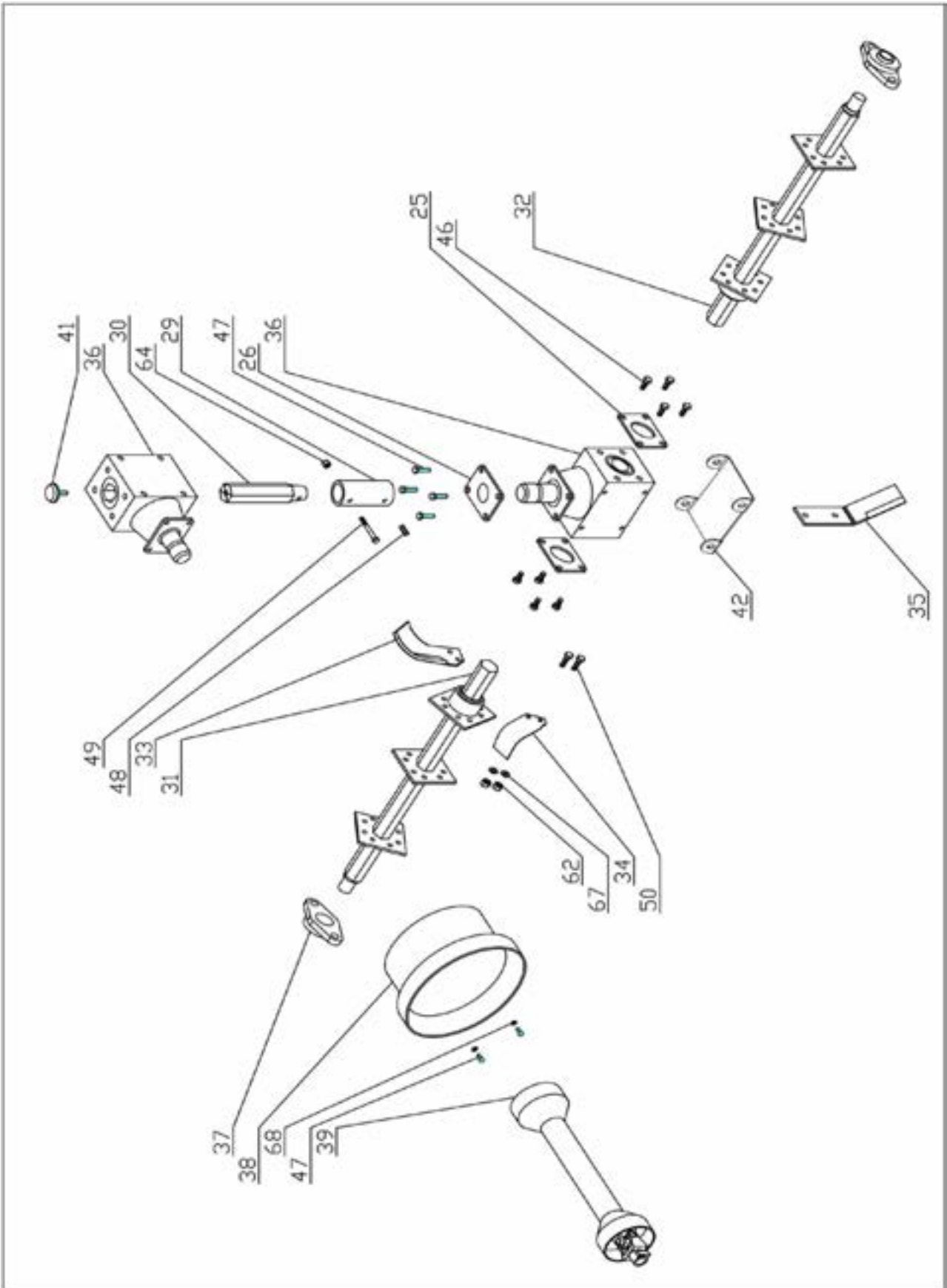
For service, spare parts and information, call your local dealer.

SPARE PARTS AND OPTIONS

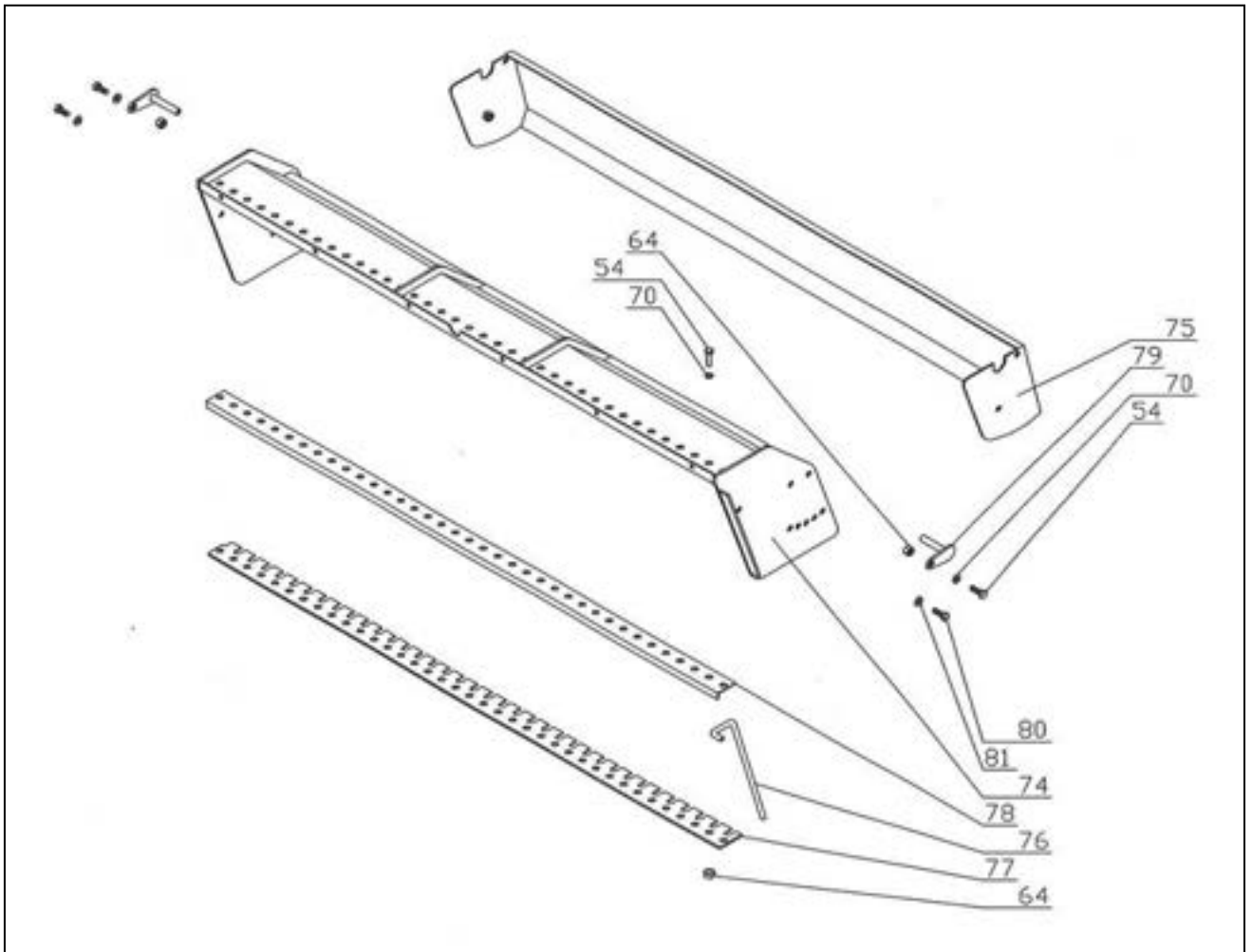
SHEET METAL



DRIVE TRAIN COMPONENTS



STONE BURIERS KIT



SPARE PARTS LIST

Pos.	Code	Description	Quantity				
			85	105	125	96	65
1	SOL051AVD	Front deck 85	1				
1	SOL051BVD	Front deck 105		1			
1	SOL051CVD	Front deck 125			1		
1	SOL051DVD	Front deck 96				1	
1	SOL051EVD	Front deck 65					1
2	SOL158AVD	Rear deck 85	1				
2	SOL158BVD	Rear deck 105		1			
2	SOL158CVD	Rear deck 125			1		
2	SOL158DVD	Rear deck 96				1	
2	SOL158EVD	Rear deck 65					1
3	SOL194VD	Left side	1	1	1	1	1
4	SOL195VD	Right side	1	1	1	1	1
5	SOL161AVD	Tail board 85	1				
5	SOL161BVD	Tail board 105		1			
5	SOL161CVD	Tail board 125			1		
5	SOL161DVD	Tail board 96				1	
5	SOL161EVD	Tail board 65					1
6	SOL152VD	III° point right side	1	1	1	1	1
7	SOL151VD	III° point left side	1	1	1	1	1
8	SOL157VD	Right gear box holder	1	1	1	1	1
9	SOL156VD	Left gear box holder	1	1	1	1	1
10	SOL181VD	Bracket	2	2	2	2	2
11	SOL054VD	Lower gear box holder	1	1	1	1	1
12	SOL159VD	Lower gear box bracket	4	4	4	4	4
13							
14	SOL058VD	Slide	2	2	2	2	2
15							
16							
17							
18	SOL184ZD	Tail board protection	1	1	1	1	1
19	SOL183VD	Chain holder	1	1	1	1	1
20	HOL203VD	Chain holder – tail board	1	1	1	1	1
21	SOL175VD	Shaft	1	1	1	1	1
22	SOL059ZD	Shaft locker	2	2	2	2	2
23	SOL154ZD	III° point bush	1	1	1	1	1
24	SOL169ZD	Tail board bush	2	2	2	2	2
25	SOL060ZD	Lower gear box side flange	2	2	2	2	2
26	SOL167ZD	Lower gear box upper flange	1	1	1	1	1
27	SOL189ZD	Cover	1	1	1	1	1
28							
29	SOL062VD	Transmission bush	1	1	1	1	1
30	SOL165D	Transmission shaft	1	1	1	1	1
31	SOL063AVD	Right rotor 85	1				
31	SOL063BVD	Right rotor 105		1			
31	SOL063CVD	Right rotor 125			1		
31	SOL063DVD	Right rotor 96				1	
31	SOL063EVD	Right rotor 65					1
32	SOL064AVD	Left rotor 85	1				
32	SOL064BVD	Left rotor 105		1			
32	SOL064CVD	Left rotor 125			1		
32	SOL064DVD	Left rotor 96				1	
32	SOL064EVD	Left rotor 65					1
33	HOL154D	Right blade	8	10	12	10	6
34	HOL215D	Left blade	8	10	12	10	6

Pos.	Code	Description	Quantity				
			85	105	125	96	65
35	SOL200D	Middle blade	1	1	1	1	1
36	42000003	Gear box	2	2	2	2	2
37	42400006	Pillow block UCFL 205	2	2	2	2	2
38	41900008	Plastic protection	1	1	1	1	1
39	42600104	PTO shaft I° L=700	1	1	1	1	1
40	40900001	Chain	1	1	1	1	1
41	42200005	Handle M10x15	1	1	1	1	1
42	SOL196ZD	Lower Gear Box Protection	1	1	1	1	1
43	41300001	Safety pin Ø10	2	2	2	2	2
44	43700012	Spring Pin With Chain	1	1	1	1	1
45							
46	40100139	Screw M8x25 UNI 5933	8	8	8	8	8
47	40100077	Screw M8x20 UNI 5739	6	6	6	6	6
48	43200002	Set screw M10x15 UNI 5927	1	1	1	1	1
49	40100198	Screw M10x75 UNI 5737	1	1	1	1	1
50	40100010	Screw M12x35 UNI 5738	32	40	48	40	24
51							
52	40100006	Screw M10x50 UNI 5739	2	2	2	2	2
53	40100043	Screw M10x25 UNI 5739	23	23	23	23	23
54	40100012	Screw M10x30 UNI 5739	47	53	59	51	41
55	40100054	Screw M10x35 UNI 5739	4	4	4	4	4
57	40100024	Screw M10x130 UNI 5737	5	5	5	5	5
58	40100108	Screw M10x140 UNI 5737	3	3	3	3	3
59	40100022	Screw M12x90 UNI 5737	1	1	1	1	1
60	40100023	Screw M12x40 UNI 5739	4	4	4	4	4
61	40100080	Screw M16x35 UNI 5739	4	4	4	4	4
62	40200007	Nut MB12x1,25 UNI 5587	32	40	48	40	24
63	40200005	Nut M10 UNI 5588	2	2	2	2	2
64	40200003	Nut M10 DIN 980	89	95	101	93	83
65	40200006	Nut M12 DIN 980	5	5	5	5	5
66	40200008	Nut M16 DIN 980	4	4	4	4	4
67	40300005	Washer Ø12 UNI 9195 – DIN 127B	32	40	48	40	24
68	40300031	Washer Ø8x24	2	2	2	2	2
69	40300004	Washer Ø12 UNI 6592	10	10	10	10	10
70	40300003	Washer Ø10 UNI 6592	84	90	96	88	78
71	40300013	Washer Ø10x30	3	3	3	3	3
72	40200139	Nut M10 UNI 5587	2	2	2	2	2
73	40300045	Washer Ø12x36	2	2	2	2	2
74	SOL065AVD	Frame 85	1				
74	SOL065BVD	Frame 105		1			
74	SOL065CVD	Frame 125			1		
74	SOL065DVD	Frame 96				1	
74	SOL065EVD	Frame 65					1
75	SOL067AVD	Tail board 85	1				
75	SOL067BVD	Tail board 105		1			
75	SOL067CVD	Tail board 125			1		
75	SOL067DVD	Tail board 96				1	
75	SOL067EVD	Tail board 65					1
76	SOL220D	Spring	25	31	37	29	19
77	SOL212AVD	Spring stopper 85	1				
77	SOL212BVD	Spring stopper 105		1			
77	SOL212CVD	Spring stopper 125			1		
77	SOL212DVD	Spring stopper 96				1	
77	SOL212EVD	Spring stopper 65					1
78	SOL214AVD	Spring bracket 85	1				
78	SOL214BVD	Spring bracket 105		1			
78	SOL214CVD	Spring bracket 125			1		
78	SOL214DVD	Spring bracket 96				1	

Pos.	Code	Description	Quantity				
			85	105	125	96	65
78	SOL214EVD	Spring bracket 65					1
79	SOL066ZD	Tail board pin	2	2	2	2	2
80	40100013	Screw M12x25 UNI 5739	2	2	2	2	2
81	40300045	Washer Ø12 UNI 6593	2	2	2	2	2

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